Title (en)

LOW-ROUGHNESS SURFACE-TREATED COPPER FOIL WITH LOW BENDING DEFORMATION, COPPER CLAD LAMINATE COMPRISING SAME, AND PRINTED WIRING BOARD

Title (de)

OBERFLÄCHENBEHANDELTE KUPFERFOLIE MIT GERINGER RAUHIGKEIT UND GERINGER BIEGEVERFORMUNG, KUPFERKASCHIERTES LAMINAT DAMIT UND LEITERPLATTE

Title (fr)

FEUILLE DE CUIVRE TRAITÉE EN SURFACE À FAIBLE RUGOSITÉ AYANT UNE FAIBLE DÉFORMATION À LA FLEXION, STRATIFIÉ PLAQUÉ DE CUIVRE LA COMPRENANT, ET CARTE DE CIRCUIT IMPRIMÉ

Publication

EP 4307846 A1 20240117 (EN)

Application

EP 22767299 A 20220111

Priority

- KR 20210032133 A 20210311
- KR 2022000439 W 20220111

Abstract (en)

The present invention relates to a surface-treated copper foil, which has excellent adhesive strength with a resin substrate, shows low bending deformation after adhesion with a resin substrate, and is suitable as a high-frequency foil due to its low transmission loss, to a copper clad laminate comprising same, and to a printed wiring board. The present invention provides a surface-treated copper foil comprising a surface-treated layer formed on at least one surface of an original copper foil and an anti-oxidation layer formed on the surface-treated layer, wherein at least one surface of the surface-treated copper foil comprises fine copper particles having an average particle diameter of 100 nm or less and the surface-treated copper foil has a deformation value (Y) of 5 or smaller as expressed by the following equation: Deformation value (Y) = Tensile strength deformation value (Y1) + Elongation deformation value (Y2) (where, Y1 = (T1-T2)/(kgf/mm²); Y2 = (E2-E1)/%; T2 and E2 represent tensile strength and elongation, respectively, as measured after heat treatment at a pressure of 4.9 Mpa and a temperature of 220°C for 90 minutes; and T1 and E1 represent tensile strength and elongation, respectively, as measured at room temperature).

IPC 8 full level

H05K 3/38 (2006.01); **B32B 15/08** (2006.01); **B32B 15/20** (2006.01); **H05K 1/09** (2006.01)

CPC (source: EP KR US)

B32B 15/08 (2013.01 - KR); **B32B 15/085** (2013.01 - EP); **B32B 15/14** (2013.01 - EP); **B32B 15/20** (2013.01 - EP KR); **C25D 3/38** (2013.01 - US); **C25D 5/48** (2013.01 - US); **C25D 9/04** (2013.01 - US); **H05K 1/032** (2013.01 - US); **H05K 1/09** (2013.01 - EP KR); **H05K 3/188** (2013.01 - US); **H05K 3/38** (2013.01 - US); **H05K 3/381** (2013.01 - KR); **H05K 3/384** (2013.01 - EP); B32B 2307/538 (2013.01 - EP); B32B 2457/08 (2013.01 - EP); H05K 2201/0137 (2013.01 - EP); H05K 2201/0154 (2013.01 - EP KR); H05K 2201/0355 (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4307846 A1 20240117; CN 116762482 A 20230915; JP 2024505241 A 20240205; KR 102495997 B1 20230206; KR 20220127618 A 20220920; TW 202246581 A 20221201; US 2024121902 A1 20240411; WO 2022191402 A1 20220915

DOCDB simple family (application)

EP 22767299 A 20220111; CN 202280011278 A 20220111; JP 2023546150 A 20220111; KR 20210032133 A 20210311; KR 2022000439 W 20220111; TW 111105622 A 20220216; US 202218275329 A 20220111